

Application No. 10/687,205
Amendment dated September 6, 2005
After Final Office Action of June 8, 2005

Docket No.: 28944/38522

LISTING OF CLAIMS

Claim 1 (Currently Amended): A dynamic seal for a rotary shaft comprising a sleeve for being constrained in rotation on the shaft and an annular lip of polymer having a low coefficient of friction to come into sliding rotary contact with a stationary casing surrounding said shaft so that said dynamic seal provides sealing between said shaft and said casing, wherein said dynamic seal further comprises an annular encoder element of magnetizable polymer presenting at least one polarized mark, said encoder element being secured to said sleeve and having at least one annular surface to which said lip is bonded, and said lip being made of PTFE.

Claim 2 (Previously presented): A seal according to claim 1, wherein the encoder element is made of elastoferrite.

Claim 3 (Cancelled)

Claim 4 (Previously presented): A seal according to claim 1, wherein the lip is bonded directly to the encoder element.

Claim 5 (Previously presented): A seal according to claim 1, wherein the annular surface of the encoder element extends radially.

Claim 6 (Previously presented): A seal according to claim 1, wherein the encoder element is bonded directly to the sleeve, said sleeve being made of metal.

Claim 7 (Previously presented): A seal according to claim 1, wherein the encoder element presents a circular track provided with polarized marks formed by sectors with alternating north and south polarization.

Claim 8 (Previously presented): A seal according to claim 7, wherein the encoder element presents a first annular face facing radially inwards which is bonded directly to an outside wall of the longitudinally-extending sleeve, and a second annular face facing radially outwards on which the track provided with polarized marks is formed.

Application No. 10/687,205
Amendment dated September 6, 2005
After Final Office Action of June 8, 2005

Docket No.: 28944/38522

Claim 9 (Previously presented): A seal according to claim 8, wherein the second annular face presents a portion extending along a fraction of the shaft which is not surrounded by the stationary casing, the track provided with polarized marks being formed on said portion.

Claim 10 (Previously presented): A seal according to claim 7, wherein the sleeve presents an annular collar extending radially and in which the encoder element presents a first annular face extending radially, which face is bonded directly to said collar, and a second annular face parallel to the first face, on which the track provided with polarized marks is formed.

Claim 11 (Original): A device comprising a rotary shaft, a casing filled with liquid in which the rotary shaft penetrates, and a dynamic seal according to claim 1 having its sleeve constrained to rotate with the rotary shaft and having its sealing lip in sliding contact with the casing, thereby providing sealing between said shaft and said casing.

Claim 12 (Withdrawn): A method of fabricating a dynamic seal for a rotary shaft comprising a sleeve for being constrained in rotation on the shaft, an annular lip of polymer having a low coefficient of friction to come into sliding rotary contact with a stationary casing surrounding said shaft so that said dynamic seal provides sealing between said shaft and said casing, and an annular encoder element of magnetizable polymer having at least one polarized mark and at least one annular surface, the method comprising the following steps:

placing said sleeve, a blank for said encoder element having at least one annular surface, and a preform for said lip concentrically in a first half-mold, said blank being at least partially in contact with said sleeve, and said preform being at least partially in contact with the annular surface of said blank; and

hot-pressing by means of a second half-mold to vulcanize said blank, to bond said preform for said lip to the annular surface of said blank, and also to shape said blank for the encoder element and said preform for the lip to take up a determined profile.